

ABSTRACT OF THE DISCLOSURE

A segmented labyrinth seal (10) having a windback configuration formed around a rotatable shaft for preventing leakage of oil from a bearing housing having a first face (22) and a second face (23). An exterior cylindrical surface (19) and an interior cylindrical surface (18) extend between the first face (22) and the second face (23). A thread pattern (40) provided on the interior cylindrical surface (18) providing the windback configuration, and configured in a right-hand direction or a left-hand direction. A plurality of profiled teeth (41) form the thread pattern (40) and have first sides (43), second sides (44), and connecting sides (45) extending between the first sides (43) and the second sides (44). Leading edges (47) are formed where the first sides (43) join the connecting sides (45), and trailing edges (48) are formed where the second sides (44) join the connecting sides (45). The first sides (43) and the second sides (44) are slanted toward the first face (22). A pressure drop is taken over the plurality of profiled teeth (41). A channel (C) tracing the thread pattern (40) is formed between the first sides (43) and the second sides (44) of adjacent teeth of the plurality of profiled teeth (41), the channel being adapted to capture the oil from the bearing housing, and returning the oil to the bearing housing without the need for axial drain holes.